



Testimony
Before the Subcommittee on Criminal Justice,
Drug Policy and Human Resources
Committee on Government Reform
United States House of Representatives

**Recent Events Concerning Stem Cell
Research Fraud in South Korea**

Statement of

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Good afternoon, Chairman Souder and Distinguished Members of the Subcommittee. I appear before you today, in my roles as scientist and Chair of the National Institutes of Health (NIH) Stem Cell Task Force, to discuss the recent events concerning stem cell research fraud that is reported to have occurred in South Korea. As you know, a review and analysis by the Seoul National University Investigation Committee concluded that human embryonic stem cell lines were not derived from embryos created by somatic cell nuclear transfer (SCNT), as claimed, that fabricated data was used, and that there had been ethical violations in the donation of human oocytes used in the experiments.

In 2004, Dr. Woo Suk Hwang and collaborators published an article in the journal Science claiming that they had derived a stable human embryonic stem cell line (NT-1) from an embryo generated by somatic cell nuclear transfer (SCNT). Subsequent investigation by the Seoul National University Investigation Committee revealed that this claim was not supported by DNA testing. In addition, the investigation revealed that the photographs allegedly taken of the NT-1 cell line were in fact photographs of an existing stem cell line derived not from an SCNT embryo, but instead derived from an embryo produced by in vitro fertilization.



In 2005, Dr. Hwang and collaborators published a second article in Science, where they claimed to have made the process of deriving human embryonic stem cell lines from embryos created by SCNT much more efficient than was reported in the 2004 publication. In this paper, the authors claimed to have developed an improved protocol for deriving patient-specific embryonic stem cells from embryos created through SCNT. They reported the creation of eleven human embryonic stem cell lines from 185 embryos created by SCNT, many of which involved nuclei from cells derived from individuals with spinal cord injury, juvenile diabetes, or congenital hypogammaglobulinemia, an inherited

immunodeficiency disorder. Subsequent review by Seoul National University led the Investigation Committee to conclude that the data presented in this 2005 paper was based on only two human embryonic stem cell lines, neither of which was derived from an embryo created by SCNT. They concluded that no disease-specific human embryonic stem cell lines derived from SCNT embryos are represented in this publication, nor is there any basis for believing the Koreans ever successfully created any such lines.

While the events in South Korea are extremely troubling, scientific fraud is not common, though it is also not restricted to this one area. There have been reports in recent years of fraudulent research in other areas of science as well. The scientific community must remain vigilant to ensure that the risk of scientific fraud is minimized. It is also important to note that such fraud is sometimes revealed when other reputable scientists cannot reproduce results that are subsequently revealed to be fabricated, and that the great majority of scientists around the world are deeply committed to rigorous standards of proof and verification. The scientific enterprise absolutely depends upon such standards. And while the stem cell research fraud in South Korea is unacceptable, it does not reflect on the potential of human embryonic stem cell research one way or the other. The vast majority of scientists are honest and hardworking in pursuing their research to benefit the human condition.

I thank you for your time. I will answer any questions that you may have.